August 30, 1870. Tuesday. FAIRLIE'S "LITTLE WONDER." Some projectors, from their indomitable energy and untiring perseverance, deserve success; and in the case of certain others, who do not manifest those qualities, the intrinsic merit of their schemes or projects should command success. Mr. Fairlie and his "Little Wonder" combine the two elements, and are well entitled to the cordial and unanimous approval awarded to them by all competent judges who examine their claims. An interesting series of experiments, which are to last for three days, testing the powers of performance of Mr. Fairlie's double bogie engine, was commenced here this morning upon the Festiniog Railway. A party of dis-tinguished professional gentlemen left Euston Station last night at 9.15, under the personal care of Mr. Fairlie, in three saloon carriages ordered by that gentle-motion, or any any other cause, unless we had known it to be so, that we were man. The party breakfasted at Barmouth, and reached this place about travelling upon a railway with such a Manuafcturers and Wholesale eleven A.M., when the experiments were at once begun. Before proceeding to eleven and a half inches. at once begun. Before proceeding to offer any description of the experi-ments, it may be mentioned that among the gentlemen present were: Colonel Dickens, Secretary of the Public Works Department of the Indian Government; Colonel Strachey, ActingS ecretary of the same department; Captain Stanton, R. E., Captain C. H. Luard, R. E., Captain Henry Morland, R. E., Chair-man of the Bombay Harbour Board; Messrs. H. Lee Smith, C. E., Chief Engineer of the Northern Punjuab State gineer of the Northern Punjuab State Railway; H. J. Wilie, Resident Engin-eer of the same; W. Cross Buchanan, C. F from Brazil: Geo. Laidlaw, from with scenes not destitute of grandear, E., from Brazil; Geo. Laidlaw, from Upper Canada; A. H. Rendel, Engineer; W. B. Wright, Locomotive Superin-tendent Madras Railway; F. G. Gilbert, C. E.; R. H. Tait, of the firm of Merilees and Tait, Glasgow; Peter Brother-hood, T. C. Glover, and T. Dewer, C. E., of the firm of Glover and Co., Rail-E., of the firm of Glover and Co., Rail-way Contractors, Bombay; George Al-lan, C. E., F. C. Danvers, C. E., G. Jas. Morrison, C. E., etc. Mr. Fairlie, Mr. C. E. Spooner and his son, with Mr. A. P. Hobson, conducted the experiments. The Duke of Satherland, we under-stand, had expressed his regret that he was prevented from joining the party. The visitors, who had not before seen the Festinion Failway and its miniature

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The visitors, who had not before seen the Festiniog Railway and its miniature rolling stock, were much interested, and—it may be added—amused by the diminutive proportions of the carriages. A passenger train was dispatched from the Portunadoe terminus a few minutes after the visitors reached the station. It consisted of engine and tender, one first one second, and two third-class first, one second, and two third-class carriages, with a van. The string of venicies looked more in veritable railway train; but there were the carriages, well filled with full-grown at the Corsey Gedol Hotel-I have the carriages, well filled with full-grown passengers of average weight. The guage of the line, as the public may know, is only 1 foot 11¹/₂ inches. The ordinary engines weigh about ten tons, coaled and watered, and the tenders a little over a ton. The passenger car-riages are, for the most part, seated longitudinally, the passengers sitting riages are, for the most part, seated longitudinally, the passengers sitting back to back. This arrangement, of course, brings the center of gravity im- the purpose of collecting information, mediatals over the sails, and readers with a view to reporting to their reover the line on each side of comparatively little consequence. The carways, and are necessarily narrower than the others; they have accommodation for two and three passengers on each seat. Diminutive though these vehicles are, they afford as ample and com-fortable accommodation as the enordeed, reduced to the utmost minimum. This remark applies alike to engines, passenger carriages and goods trucks, which carry four times their own weight of paying load. The carriage wheels are 18 inches in diameter, and the floors of the vehicles only about 7 inches above the roadway. The trains have a truly comical appearance, from the lowness of the floors and the invisibility of the wheels; they are much more like boxes upon short rollers than ordinary railway or other wheeled carringes. steadiness of the engines, and secondly, their power. The first test was applied by the visitors riding in batches upon the footplate, first of one of the engines, then of the other: It would be wasting time and space to dilate upon this part of the day's work. There was nobody indifferent, but every one was sharp and decided in expressing the opinion that the "Little Wonder" was in strong con-trast with the "Welsh Poney" in the smoothness with which it passed over both curves and straight runs. The one bumped and ground the rails, as all engines do with s long wheel base and rigid rectangular axles; the other, with such short wheel bases, glided round as smoothly as could be desired; there was no difference of opinion on this point that Fairlie's engine had decidedly the best of it. The next test related to the best of IL. The next test related to the comparative power of the two classes of engine. The "Welsh Poney" was yoked to a train of seventy-seven slate trucks, the weight of the train being 193 tons and thirteen owt., exclusive of engine and tender. It may be proper to say here that the "Welsh Poney" and engines of the same class are about ten tons in weight, and their tenders about one and a half tons coaled and watered OMAHA TRADE one and a half tons coaled and watered. Mr. Fairlie's "Little Wonder," which is really two engines both exercising tractive power, weighs about nineteen and a half tons. To resume, "The Poney" struggled gallantly enough with the heavy load attached, but had to sue

man. This test consisted of tagging to the "Little Wonder" a very long train -well, how long?-only 380 yards! It PATENT AXLE CREASE consisted of 125 trucks, seven passenger carriages, and a boat carriage, besides the engine. The weight of the train was 114 tons 14 cwt. The distance between Portmadoc and Festiniog is rather less than fourteen miles. The continuous rise is by gradients of, for the greater part, one in eighty-five. It might have been feared that such a diminutive affair as the "Little Won-der" would have been beaten by such a load and such a road; but it was not so. The time occupied in the journey was one hour and seventeen minuter, but this included four stoppages, and an aggregate of eighteen minutes of abso-lute stoppage, which gives the result of the whole journey under the honr. At some moments, in running up to Festiniog, we took the impression that the speed was more than thirty miles an hour; but, in any case, we should not have known, from speed, comfort,

It is very hard to speak or write about gauges and gradients in connection with such a subject as this. There is nothing finer in all creation of its kind than the scenery at and near Portmadoc, and especially on the Festiniog line. The Festiniog and the other valleys are inexpressibly charming, and the line is in many places very like indeed to some portions of the Mont Cenis Summit Railway. From Portmadoc to Festiniog the traveler does not see anyand quite as beautiful. Descending to Portmadoc, the estuaries of the Glaswyn and Penryn present pictures of loveliness not to be surpassed in any part of the world. Not even the vale of Turin, descending from the Alps, can surpass the beauty of these lovely valleys; the view from the embankment at Portma-doc, with the peak of Snowdon towering in the background, the placid estuary in front; and the framing ranges of richly mottled "everlasting hills," furnish a picture that is travishing to look at-an impression to be cherished, that can never be lost or forgotton.

In the return trip from Festiniog much interest was excited by the courageous conduct of the wife of Colonel Strachey, in sharing with two compan-ions the adventure of traveling in the boat carriage, unattached. The lady took a lively interest in all the proceed-ings and experiments of the day, but she did more than could have been hoped for the way of adding picturesque effect by occupying the boat carriage on the re- KEITH BROTHERS turn journey. This evening the party returned to Barmouth, for a late dinner forestall such report. The opinion of all was decidedly favorable to the bogie, riages are about 6 feet wide and 6 feet 6 inches high in the centre, and each is seated for fourteen passengers. A few third-class carriages are seated cross-with railways that will pay the districts FURS, and countries as yet unprovided with them. BARMOUTH, Friday. This morning the party has gone, un-der the direction of Mr. Fairlie, to Carmarthen, and thence to Llanelly, on the fortable accommodation as the enor-mous carriages upon ordinary lines, and are in strong contrast with them in the much higher proportion they afford of paying to dead weight—the dead weight hauled on the Festiniog Railway is, in-deed, reduced to the utmost minimum. This remark applies alike to engines, passenger carriages and goods trucks, time for dinner. To-morrow (Saturday) morning they will inspect the "Pro-gress," on the Brecon and Merthyr Rail-way, with heavy train up the seven-mile bank of 1 in 38; then the party will return to town. The question of relative consumption of coal by the Fairlie and other engines is necessarily an important element in the problem. Mr. Spooner, the man-The experiments of to-day seem to have had two distinct objects: to test, first, the comparative smoothness and steadiness of the engines, and secondly, very strong evidence on the same point. He follows an elaborate, detailed state-ment, with the following epitome: "It will be seen that the Progress (Fairlie's **CARTH** double bogie), with a consumption of 34 tons 6 owt, of coal, hauls 6,600 tons in the same time as the Cyclope or Severn hauls 4,676 tons, with an average con-sumption of coal of 31 tons 13 cwts; or, in other words, the Progress, with a con-sumption of 9.7 per cent. more coal, does 44.5per cent. more work, the total cost for the Progress being 7.18 pence per mile run, while the sverage of the Cyclops run, while the average of the Cyclops and Severn is 6.34 pence. That is, the Progress does actually 44.5 per cent. more duty, at an increased cost of only '84 pence per mile, or the total cost of hauling the said 6,600 tons with, engines of the Cyclops or Severn class, would be £34 11s. 3d., as compared with £27 19s. 9d., the cost of haulage with the Pro-gress." English paper.

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